

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

TorqMaster International

Connecticut State Technology Extension Program

Torqmaster International Reaps The Benefits Of Lean

Client Profile:

TorqMaster International is an engineered friction hinge manufacturer in Stamford, Connecticut. The company, which employs 70 people, services high-demand and high-tech industries such as notebook computer and flat panel display manufacturers and medical instrumentation manufacturers.

Situation:

TorqMaster International recently became a preferred supplier of friction hinges used in automotive rear seat entertainment systems. The company had to implement innovative manufacturing techniques to meet the demands of this rapidly growing market while maintaining profit margins and keeping the competition at bay. TorqMaster needed to do this within the current operating space and with the existing team members. President and Chief Operating Officer Bruce Hall approached the Connecticut State Technology Extension Program (CONNSTEP), a NIST MEP network affiliate, in Spring 2001. Because the company had just contracted with CONNSTEP to help it become ISO 9000 registered, it was natural that CONNSTEP should help them address questions of productivity and efficiency in the process.

Solution:

CONNSTEP began delivering ISO training sponsored by the Department of Labor (DOL) to TorqMaster International in April 2001 and soon became aware of TorqMaster's desire to shorten lead time. Before the month was over, CONNSTEP began to deliver lean awareness training, also sponsored by DOL, to TorqMaster employees. Hall became a believer in lean as he witnessed the now famous "Lego Simulation," which clearly demonstrates the benefits of lean manufacturing over traditional manufacturing.

Fixed and organized work cells, established routines, effective floor layout, batch reductions, point-of-use storage, one-piece flow, quick changeovers, and takt time were essential factors to the achievement of TorqMaster's lean effort. AnneMarie Mulkerin, TorqMaster's director of operations, made it known to the entire production crew that the lean system had the potential to improve the profitability of the company and they would have a hand in getting it there. Mike Bucci, a lean service provider and CONNSTEP partner, was brought in to train TorqMaster employees in lean manufacturing processes. He formed a "Lean Team Committee" from members of each department and got to work addressing the assembly process. Bucci instructed and demonstrated value stream mapping and



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lean principles. The committee learned about "pull" versus "push" manufacturing, and became excited by the possibilities. After applying lean techniques to various aspects of the assembly process, TorqMaster International reduced assembly time and space requirements, reduced inventory, and cut its lead time by half. The company also experienced a threefold increase in productivity. By cutting costs and improving productivity, TorqMaster gained a bigger profit margin.

Results:

Reduced hinge assembly time by 45 percent.

Reduced assembly space requirements by 60 percent.

Reduced inventory by 33 percent.

Cut lead time by 50 percent.

Improved productivity from 14 people working 7-hour days, producing 700 finished parts to 4 people working 5-hour days, producing 500 parts.

Testimonial:

"Lean manufacturing is an excellent solution for keeping TorqMaster competitive in the marketplace. We can utilize our existing space and workforce to service more customers, keep our margins aggressive, and reduce our lead times. We have been extremely pleased with the results achieved on our first projects [with the Connecticut State Technology Extension Program]. We are looking forward to applying these principles to our entire production line."

Bruce Hall, Chief Operating Officer